

INTERCOLLEGIATE BROADCASTING SYSTEM

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Excerpts from recent Engineering Department correspondence regarding field strength measurements and new Federal Communications Commission regulations.

From George Abraham, Nov. 18, 1948 to Hale Aarnes, Radio Education Department, Stephens College:

"Wired-wireless: The transmission of electromagnetic intelligence between two or more points by means of a conducting path and an induction field.

"Wired-wireless Broadcasting: The transmission of modulated electromagnetic waves over a system of conductors to provide limited-area reception within the induction field surrounding the conductors.

"One may draw a comparison between a standard broadcasting station and a wired-wireless broadcasting station in the following way. A standard broadcasting station has a short wire link between transmitter and antenna and a relatively long space or radiation distance between the antenna and the receiver. The wired-wireless station on the other hand employs relatively a long wire link (transmission system) and a comparatively small space region in which the radio frequency signals may be heard."

From Herbert Barlow, December 22, 1948 to Mr. George Snyder, Director of Radio, Olivet Nazarene College:

"We have received your check for a share in the field strength meter and wish to thank you.....To date response from the stations in IBS has been very sparse amounting to only a dozen of which four have indicated they will buy or already have bought a share in the meter project. Of the remaining eight, four indicated they already had or could obtain instruments and four did not have the money available.

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".....I must state that there is at present a new low power arrangement, for the FCC has not published their recommendations for new rules governing carrier current broadcasting. However, in general we feel that the present radiation limit is purely arbitrary and inadequate for the majority of campus stations and should be raised. Even if an input power to the transmitter were specified, it too would not properly define the radiation. Thus as far as the radiation aspect of the new rules is concerned we must be able to present at the time of the formal hearings sufficient data to maintain our position. Without data we will be at a loss, but try and convince the stations of that fact! If they expect to maintain on a broadcasting basis they must pull together in the common cause."

From Herbert Barlow, December 22, 1948 to Pete Swanson, Representative for the Southern IBS Region:

"Our field strength meter cooperative plan is bogging down with the reluctance of the stations to reply. In a recent memo you indicated that WWWP and Alabama were willing to go along with the plan if there would be a continued use of the instrument. As far as WWWP is concerned they have informed us that they have a meter available from a local station which is O.K. But with regard to Alabama I wish you would tell them that while we want to get an immediate response of their radiation, etc., it will be necessary to periodically check the stations radiation in order to be sure the station stays within the limits set. This can be compared to the supervision that an ordinary broadcasting station has to give to their field strength pattern. There are too many variables involved to be sure that a station is always legal, and then of course, there is the constant possibility that a station will modify its equipment and then a measurement becomes even more necessary....."

"One other matter involves WUSC who are trying to build themselves a meter

I wrote the chief engineer that his plan was not too well thought out-- you seem to have thought of the same thing and went through some experiments at the lab. The conclusion reached was that it was not practicable to have the stations attempt such a project for they could not get the same accurate results that would be obtained with a commercial model. It is very important when you are trying to compare technical information from a large number of sources. And then I can not see where \$67.50 is so much, for to build one of your own it would cost at least \$45. Then, you should consider the time involved. It just doesn't add up."

From George Abraham, December 10, 1948 to Ted Conant, Engineer, Middle Atlantic Region of IBS:

"As I mentioned, the FCC is still somewhat undecided as to the most desirable regulations that should be established for governing wired-radio, however, the trend is to establish more rigid rules than to liberalize them. As you know, carrier-current communication has many other applications than that which is employed by our campus stations.....In order that the carrier-current broadcasting may be set up as a special category, i.e., one which provides a limited area public service vs. one which provides communication between two or more points, it is important that a well-planned case be presented by those of us who represent IBS and college radio at the hearings.....Toward this end, it is important that the cooperation of representative stations be enlisted so that sufficient data can be available to back any claims or requests by IBS for more adequate rules, particularly with regard to the field strength limitation. By keeping anonymous the identity of the stations involved in the tests, I feel that conclusive data can be presented without implicating the stations one way or another. As a number of types of transmission systems are utilized by the stations in IBS it is important that data be obtained concerning these systems....."

Memo from Herb Barlow to Dave Borst dated December 18, 1948:

"The proposals in the licensing of the stations have passed the Legal Dept. of the FCC and are now in the Commissioners' Offices. Won't be long now!"

From Herb Barlow, November 4, 1948, to John Steketee, WXBC:

"You pose a problem that will undoubtedly come up in many instances, that of a campus station situated "in the wilderness" so to speak, or at any rate away from any dense population.

"...The FCC will have cognizance over Bard as they do (over) Columbia U. located in the heart of upper Manhattan. At the present time the enforcement of the present regulations...seems to be at the discretion of the Field Engineer in charge of your area, and it has been this man's policy in the past not to interfere or even bother to check a station unless he receives a complaint or interference. However, we expect that as a result of the new rules that will be promulgated in the near future..... more care must be exercised to stay within the limits specified for radiation, and in fact we expect that the radiation pattern (may) have to be submitted to the F.C.C.....not only will an initial check have to be made, but we expect that an annual report (may) have to be submitted.....Thus, access to a field strength meter will be necessary at all times in the future in order for a station to regulate itself in accordance with the regulations; that is why we wish the stations to invest in some meters. And as far as your particular case is concerned, you are not necessarily exempt by being in a non-interference area. The rules apply to all and in the view of maintaining good relations with the F.C.C. we want every one of our stations to comply with the regulations (both present ones and future ones) as soon as possible. I understand your anxiety to come within an exemption class, but I am afraid that is impossible."

Prepared by: David W. Borst Jan. 3, 1949